USGS science for a changing world

Earthquake Shaking — Orange Alert

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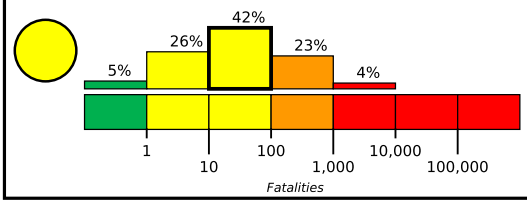
M 6.4, 3 km WSW of Petrinja, Croatia

Origin Time: 2020-12-29 11:19:54 UTC (Tue 12:19:54 local)
Location: 45.4222° N 16.2554° E Depth: 10.0 km

PAGER Version 2

Created: 1 hour, 20 minutes after earthquake

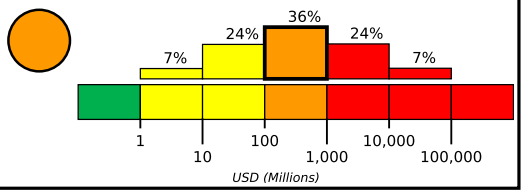
Estimated Fatalities



Orange alert for economic losses. Significant damage is likely and the disaster is potentially widespread. Estimated economic losses are 0-1% GDP of Croatia. Past events with this alert level have required a regional or national level response.

Yellow alert for shaking-related fatalities. Some casualties are possible.

Estimated Economic Losses

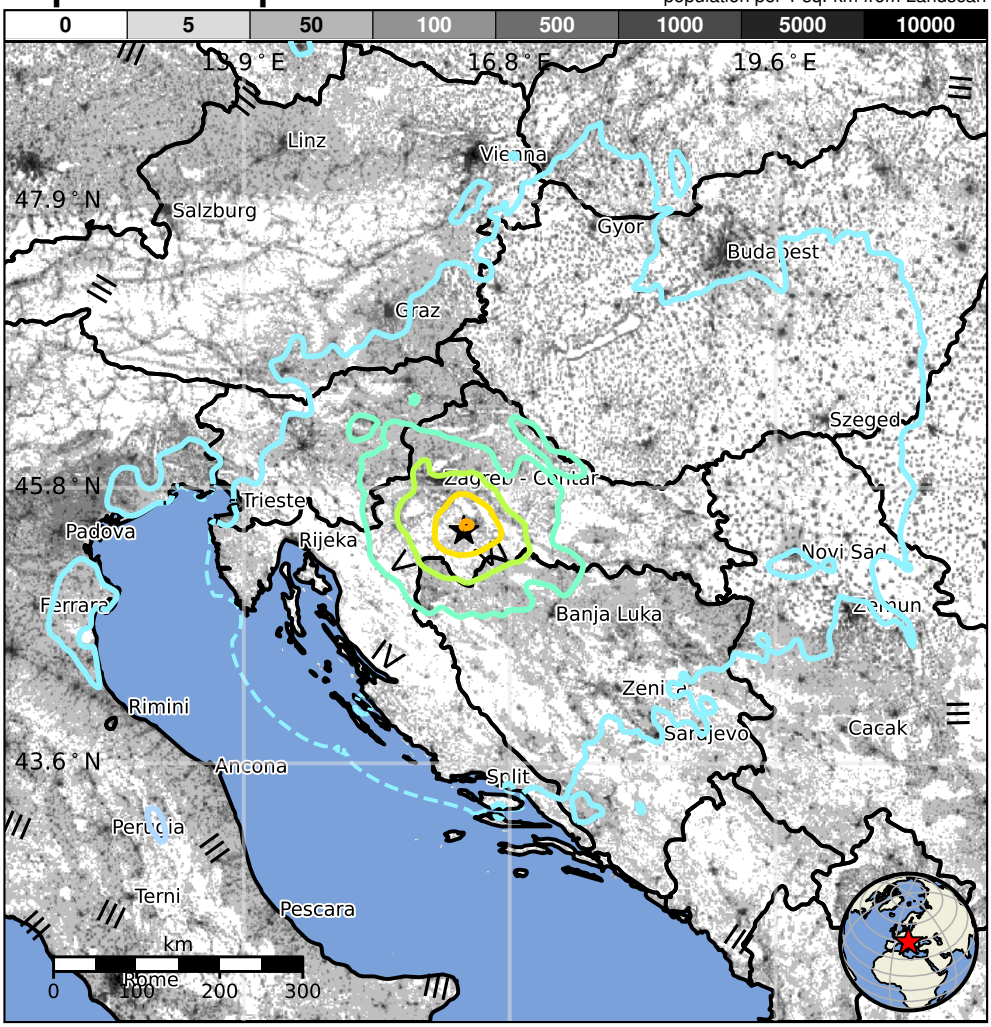


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	48,620k*	17,142k	1,261k	1,168k	73k	38k	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though resistant structures exist. The predominant vulnerable building types are mud wall with wood and unreinforced brick with mud construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1998-04-12	222	5.6	V(9k)	0
1997-09-26	379	5.7	VII(2k)	14
1976-05-06	254	6.5	IX(55k)	965

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
VIII	Petrinja	14k
VII	Budasevo	2k
VII	Sisak	36k
VII	Lekenik	2k
VII	Glina	3k
VII	Martinska Ves	<1k
III	Munich	1,260k
III	**Rome**	**2,319k**
III	Belgrade	1,274k
III	**Vienna**	**1,691k**
III	**Budapest**	**1,741k**

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

https://earthquake.usgs.gov/earthquakes/eventpage/us6000d3zh#pager

Event ID: us6000d3zh